DIRECT TESTIMONY OF

BRIAN BEDNAR

IN

DOCKET NO. 2017-281-E

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Brian C. Bednar, and my business address is 1125 E. Morehead Street, Charlotte, North Carolina 28204.

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE, AS IS RELATED TO THE SOLAR INDUSTRY.

A. I earned a B.S. in Business Administration from the University of North Carolina Chapel Hill, and a Masters of Business Administration from the Darden School at the University of Virginia.

Following the completion of my MBA, I worked in real estate development, brokerage and asset management. In 2009, I founded Birdseye Renewable Energy and am its sole owner. In 2009, I served as the developer of NC Solar One, LLC, a 2 MWac project awarded a PPA under Progress Energy's first utility scale solar request for proposal (RFP). The project was completed and is operating in Laurinburg, North Carolina. In April 2011, I filed a request for a Certificate of Public Convenience and Necessity from the North Carolina Utilities Commission for the first North Carolina solar QF, known as Dixon Dairy Road, LLC, with a capacity of 4.5 MWac. The project was issued a 15-year PPA by Duke Energy Carolinas, and was completed in late 2011. Since that time my

company has greenfield developed 38 operating projects totaling approximately 418 MWdc. Of those projects, 3 were sold as generation assets to a regulated utility and 35 were financed on the basis of a 15 year PPA. One additional project, further discussed below, has been financed with a 10 year PPA, but has not completed construction.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AS IS RELATED TO REGULATORY MATTERS REGARDING THE SOLAR INDUSTRY IN SC

A. Since 2009 I have worked in utility-scale Solar Development as the President of Birdseye Renewable Energy. I have been actively engaged in South Carolina and serving as a resource to various South Carolina legislators and industry groups since 2010. In early 2012, I hosted a bipartisan South Carolina Legislative delegation including Representative Dwight Loftis and former Senator Phil Leventis to visit and discuss the opportunity available to South Carolina through the development of solar projects like the Dixon Dairy Road project.

Q. ON WHOSE BEHALF ARE YOU PROVIDING THIS TESTIMONY?

A. Whitetail Solar, LLC, Rhubarb One, LLC, Cotton Solar, LLC and Shorthorn Holdings, LLC.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. No. I have not had the privilege of appearing before this Commission before today.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. To describe Birdseye Renewable Energy's business model for developing solar projects, and to explain why the five-year PPAs being offered by Duke in South Carolina do not provide reasonable opportunities to attract capital under that model, or any other commercially reasonable model suitable for South Carolina.

Q. WHAT IS BIRDSEYE RENEWABLE ENERGY'S BACKGROUND AND BUSINESS MODEL?

A. I founded Birdseye Renewable Energy in 2009 to develop green field solar PV projects throughout the regulated markets of the Southeast. The firm is based in Charlotte, North Carolina and has a team of 9 people focused on developing utility-scale solar projects for ownership and operation by investors. Birdseye has projects under development across the Southeast in the service territories of multiple Investor Owned Utilities and various regulatory jurisdictions. As of the date of this testimony, Birdseye has successfully developed 38 operating projects totaling 418 MWdc.

With the exception of its ownership of some non-utility scale projects, Birdseye develops and sells all its projects prior to commercial operation. Birdseye's business model is generally referred to as a green field developer. Birdseye utilizes its expertise and internal capital to create solar projects which carry a minimum amount of risk, hold all regulatory approvals, interconnect affordably, and sell energy and capacity under PPA terms that will generate a reasonable rate of return for investors. We interact regularly with the leading global solar and power investors who benefit from the operating efficiencies of large fleets

of solar assets, access to debt capital markets, ample tax equity, and competitive sponsor return expectations.

Q. WHAT DO BUYERS OF YOUR SOLAR PROJECTS FIND ATTRACTIVE ABOUT INVESTING IN SOLAR?

Birdseye's Investors recognize that solar PV is a new technology that offers attractive operational costs and rapid innovation in equipment, operation and maintenance and deployment over the near to medium term. Solar generates predictable energy output over time with no fuel risk, no emissions, modest operational complexity, and a 40-year operational life.

Q. WHY IS PPA TERM LONGER THAN 5 YEARS IMPORTANT TO ATTRACT INVESTOR CAPITAL IN YOUR SOLAR PROJECTS?

Like most competitive commercial endeavors, the financing of solar projects relies on equity investors receiving an acceptable risk-adjusted rate of return on their capital deployed. Since the energy output of solar is predictable over time and operation expenses can be contracted long term, the largest risk to a solar project is the value of energy that is not contracted under a PPA. There are several implications of this uncertainty of future revenue.

The first investor risk stems from the borrowing capacity of the project. Debt providers size a project's debt according to the contracted cash flows available to pay back the debt plus interest. Debt solutions for projects with a 5-year PPA are limited to a size where the

operating cash flows can fully amortize permanent debt on a 5-year term and meet lender covenants. Without the larger borrowing capacity and longer amortization available to QFs with longer-term PPAs, investors are unable to achieve reasonable equity returns.

A second risk for the investor is the uncertainty of the project revenues after the expiration of the initial 5-year avoided cost PPA. The typical solar financing structure will rely on the participation of a tax equity investor and debt providers. During this initial 5 years, a large portion of the cash flows go to the tax equity and debt participants and are not available to the equity investor. A 5-year PPA leaves uncertainty over what economics or terms will be available in the short term to pay back the initial project investment and provide a reasonable rate of return over the useful life of the project.

Lastly, in regulated markets such as South Carolina where there is no organized wholesale market or third-party sales, there are not viable alternative buyers for energy other than Duke Energy or another investor-owned utility. As a result, investors recognize that if Duke is unwilling to tender a reasonable or attractive PPA after the initial 5-year term, the investor may not be able to earn revenues adequate to earn even a minimal rate of return. Birdseye has explored the possibility of securing a financial instrument to hedge the energy price risk beyond the initial 5-year term. We have learned that the current electric hedging instruments are only available in unregulated markets such as PJM where energy can be freely traded and contracted. The single buyer risk in South Carolina limits market makers from pricing an electricity hedge in South Carolina beyond 5 years.

Q. WHAT IS THE SHORTEST DURATION PPA FOR A BIRDSEYE PROJECT THAT HAS ATTRACTED AN INVESTOR?

All 37 Birdseye projects financed under a PPA revenue model had a PPA term length of 15 years or more, with a single exception having a PPA term of 10 years. Several factors aligned on that specific project to make it financially viable for a particular investor, including low cost of grid interconnection, low cost of civil site prep, attractive PPA rates, and the ability to complete construction late in 2017, when few other projects remained available for investment in the fiscal year. However, we have only been able to finance one project with a 10-year term, and we view 10-year term length as an exception that does not represent the standard for a reasonable opportunity to attract capital. Aside from that single exception, all successfully-financed Birdseye utility scale projects that sell power under a PPA have a minimum PPA term of 15 years.[1]

Q. ARE THERE OTHER STATES OR REGULATED MARKETS WHERE BIRDSEYE IS DEVELOPING PROJECTS UNDER A 5-YEAR PPA?

Birdseye is developing projects in multiple regulated markets across the Southeast, including Mississippi, Georgia, Tennessee and North Carolina. In all these markets, we believe that we will need to obtain a PPA in excess of 5 years to have a reasonable opportunity to attract capital. In Georgia, Georgia Power has encouraged adoption of new solar technology by offering PPAs up to 25 years through its procurement process. There

[1] Exhibit 1 includes a comprehensive list of Birdseye's PPA-financed projects and their respective PPA term lengths.

was a robust response to Georgia Power's Renewable Energy Development Initiative RFP. Despite many Gigawatts of fully developed projects that were not selected in the RFP, I am unaware of any projects in Georgia that have been financed under a PPA with a term shorter than 5 years. Likewise, in Tennessee, Birdseye has completed 3 projects under PPAs with 20-year term using debt amortizing over a term in excess of 10 years. Again, I am unaware of any projects being constructed in Tennessee under short duration, 5-year PPAs. Projects in regulated markets with limitations on potential buyers and 5-year QF PPAs are not able to offer returns attractive to investors given the uncertainty of revenue beyond the initial PPA term. I do not believe that the shorter standard-offer PPAs authorized in those states provide reasonable opportunities to attract capital sufficient to meet legal requirements. It may be that the legality of these tariffs has not been tested because there are alternative means (i.e. RFPs) for projects in those states to obtain financeable PPAs.

Q. DESCRIBE WHAT FACTORS ARE IMPORTANT INVESTORS WHEN THEY EVALUATE SPECIFIC PROJECTS FOR PURCHASE.

Birdseye's investors evaluate three major elements of a utility scale solar project before they provide capital. First, investors require that a project have an executed Interconnection Agreement, that its upgrade costs are affordable, and that its facility construction schedule aligns with the targeted commercial operation date of the project. Second, investors will verify that Birdseye has taken care to investigate and mitigate, where necessary, site development risks that could cause unforeseen costs or delays to the targeted commercial operation date of the project. Last, investors will demand that the project has a PPA with

a credit worthy counter party for a term and rate adequate to pay operating expenses, service project debt, meet lender covenants, fund operating reserves, and generate free cash flow to equity holders such that they earn a reasonable return.

Q. DESCRIBE BIRDSEYE RENEWABLE ENERGY'S BUSINESS EXPERIENCE IN SOUTH CAROLINA.

A. Birdseye Renewable Energy began developing projects in South Carolina in 2014 and intended to be an early mover and leader in solar development in the state. When we initiated our projects in Duke Energy Progress, we were aware of increasing interest from the state legislature and South Carolina utilities to facilitate deployment of solar in the state. Further, we expected that we could develop low cost, competitive projects that had a reasonable opportunity to attract capital from investors based on our familiarity with Duke Energy Progress's interconnection processes and its QF PPA terms at the time.

Unfortunately, the extremely slow Duke interconnection process, coupled with the current terms of the QF PPA offered by Duke Energy Progress, has prevented us from completing these projects. Four of our projects, Whitetail, Cotton, Rhubarb and Shorthorn (the Birdseye projects at issue in this case) were numbers 2, 6, 18 and 23 in Duke Energy's South Carolina interconnection queue. Whitetail, Cotton, and Rhubarb are also the first projects requesting interconnection on their respective distribution sub-stations. In addition to the un-financeable PPA terms offered by Duke, the interconnection process has been extremely slow and has impaired our ability to determine the final interconnection cost and complete our projects. Whitetail solar took 34.5 months to be studied and receive

an Interconnection Agreement, even though no upgrades had to be constructed. Cotton began the interconnection process on January 15, 2015, but as of this writing has not received System Impact Study results.

Q. DESCRIBE BIRDSEYE RENEWABLE ENERGY'S EXPERIENCE IN OTHER REGULATED MARKETS.

A. Birdseye Renewable Energy has developed and completed 38 operating solar photovoltaic projects in regulated markets. Birdseye has created projects that have preferred locations, minimal interconnection upgrades, and offer efficient construction. These factors, coupled with reasonable PPA terms, have been attractive to investors. To date, all projects in regulated markets outside of South Carolina with QF PPAs have obtained the necessary capital to be constructed and operated. Some of the projects Birdseye has developed are now owned and operated by regulated utilities, and do not rely on PPA revenue. 36 of our financed projects do rely on a PPA revenue model, and all but one of these PPAs has fixed rates and term of at least 15 years. The single exception, with a ten-year term, has been previously discussed. These rates and terms have been determined by either QF PURPA obligations or competitive RFP processes.

Q. IS THERE ANOTHER MECHANISM TO PROVIDE CERTAINTY FOR A PROJECTS REVENUE STREAM?

A. No. These projects are located in the regulated territory of a vertically integrated utility. As a result, there is no opportunity to coordinate a deal with any party other than Duke within

Duke's service territory. In other words, the projects do not have access to markets where such third party PPAs are allowed.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT

BCB-1

Birdseye Renewable Energy – PPA Terms of current projects (years)

Project Name	PPA Term
Apple One	15
Arndt Farm	15
Ayrshire Holdings	15
Belwood Farm	15
Blueberry One	15
Clipperton Holdings	15
Daniel Farm	15
Dixon Dairy Farm	15
Hawkins Solar Two	20
Holstein Holdings	15
HSE Cocke School I	20
HSE Hawkins School II	20
Hutchinson Farm	15
Innovative Solar 1-2-6	15
Jersey Holdings	10
Kirkwall Holdings	15
Laurinburg Farm	15
Marshville Farm	15
McGoogan Farm	15
Mocksville Farm	15
Mount Olive I Farm	15
Mount Olive II Farm	15
North Carolina Solar I	20
North Carolina Solar II	15
Raeford Farm	15
Railroad I Farm	15
Railroad II Farm	15
Rock Farm	15
Shannon Farm	15
Sonne One	15
Sonne Two	15
South Robeson Farm	15
Tiburon Holdings	15
Town of Warsaw Solar Farm	15
Waco Farm	15
Watts Farm	15